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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,095	01/15/2002	Keita Suzuki	011719	4433

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 05/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,095

Applicant(s)

SUZUKI, KEITA

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to Claim 1, the phrase ‘body layer’ is indefinite as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean ‘a first outer layer.’ The phrase ‘consisting of a thermoplastic resin’ is indefinite, as it is stated in Claim 7 that the resin also contains a filler. For purposes of examination, the phrase will be assumed to mean ‘comprising a thermoplastic resin.’ The phrase ‘in this order from the side of an outer layer thereof’ is indefinite as its meaning is unclear. For purposes of examination, the barrier layer will be assumed to be a ‘second inner barrier layer.’ The phrases ‘adhesive component’ and ‘barrier component’ are indefinite as an adhesive component which is comprised in a barrier layer is also a barrier component. The phrase ‘gradient constituted’ is also indefinite as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean that the adhesive has a concentration gradient. For purposes of examination, the tube will be assumed to have an outer layer of thermoplastic resin and an inner barrier layer comprising a thermoplastic resin which controls fuel permeation the barrier layer comprising an adhesive having a concentration gradient within the layer and being most concentrated at the interface between the layers. Claim 1 recites the limitation "adhesive component" in line 7. There is insufficient antecedent basis for this limitation in the claim. Claim 1 recites the limitation "barrier component" in line 8. There is

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insufficient antecedent basis for this limitation in the claim. Claim 1 recites the limitation "outer layer" in line 5. There is insufficient antecedent basis for this limitation in the claim. Claim 1 recites the limitation "outer layer" in line 9. There is insufficient antecedent basis for this limitation in the claim. The term "rich" in claim 1 is a relative term which renders the claim indefinite. The term "rich" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

3. Claims 2 – 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation "the outermost" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 2 recites the limitation "the innermost" in line 4. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "the outermost" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 3 recites the limitation "the innermost" in line 4. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 5 – 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

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the invention. With regard to Claim 5, the phrase 'is based on' is indefinite as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean 'comprises.'

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokoe et al (U.S. Patent No. 5,919,326).

With regard to Claim 1, Yokoe et al disclose a multi – layer resin tube (fuel hose; column 3, lines 15 – 25) for automobiles (column 1, lines 19 – 21) comprising an outer layer of thermoplastic resin (column 4, lines 45 – 49) and an inner barrier layer comprising a thermoplastic resin which controls fuel permeation (column 5, lines 5 – 7) the barrier layer comprising an adhesive having a concentration gradient within the layer and being most concentrated at the outer layer – inner layer interface (the inner layer is plasma – modified at the interface, thus producing an adhesive; column 7, lines 54 – 67; column 8, lines 1 – 29).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over (U.S. Patent No. 5,919,326).

Yokoe et al disclose a multi – layer tube comprising an adhesive as discussed above. With regard to Claims 2 – 3 and 9, Yokoe et al fail to disclose a barrier layer comprising plural layers, each layer comprising 0.5 – 3% adhesive. However, Yokoe et al disclose a barrier layer comprising one layer, comprising at least one millionth of one percent adhesive by weight (the layer is modified; column 7, lines 54 – 67; column 8, lines 1 – 29). Therefore, the number of layers and amount of adhesive relative to non – adhesive barrier material would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the number of layers and amount of adhesive relative to non – adhesive barrier material, since the number of layers and amount of adhesive relative to non – adhesive barrier material would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Yokoe et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to Claim 4, the outer layer comprises polyamide (column 9, lines 53 – 67).

With regard to Claims 5 – 6, the barrier layer is a fluorine resin, and the adhesive is a modified fluorine resin (ethylene – tetrafluoroethylene copolymer; column 4, lines 64 – 67; column 5, lines 1 – 7).

With regard to Claims 7 – 8, the fluorine resin is blended with conductive carbon black (column 5, lines 19 – 35).

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
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[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

5/2/03